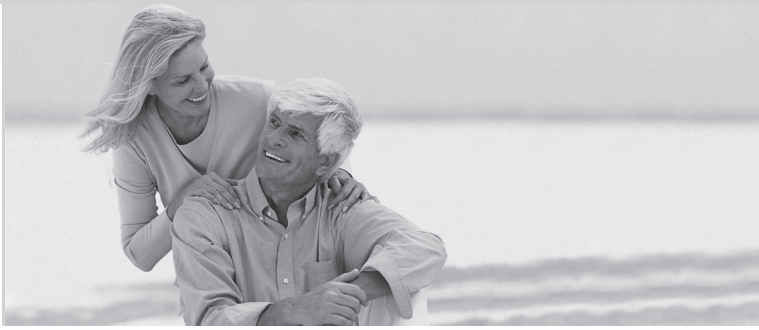
TENS eco 2

Transcutaneous nerve and muscle stimulator

Art.-No. 104062



Operating manual Art.-No. 101446-V03

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Content

Before using TENS eco 2 ..... **3**
Intended use 3
Safety instructions 3
Contra-indications 4
Side effects 4
Operating elements 4
Technical information **5**
Description of the symbols 5
Recycling 5
Technical specification 5
Operating the TENS eco 2 ..... **6**
Connecting cables and electrodes 6
Switching ON the TENS eco 2 6
Selecting a program 7
Setting the intensity 7
Terminating the stimulation 7
Interlocking the keypad 7
Switching ON/OFF the buzzer 8
Creating a user program (P13 – P24 only) 8
Factory settings 8
Switching OFF the TENS unit 8
Setting date and time (for memory query mode) 8
Memory Query Mode 8
Resetting the memory 9
Charging the battery 9
Description of the programs **10**
General information **15**
Adjustments, modifications and repairs 15
Warranty 15
Guarantee 15
Maintenance and cleaning 15
Classification 15
Delivery content 15
Accessories **16**
Reference sheet for battery retraction and disposal 18
Examples of electrode placements **19**
Electrode placement for dynamic stimulation (P10, P11, P22, P23) **23**
Overview pre-set programs **24**
Overview free programs **26**

Before using TENS eco 2

Intended use

The TENS eco 2 has been designed as a device for the generation of transcutaneous electrical stimulation of the nerves and muscles and may not be used for any other purposes.

Safety instructions

Please read the operating instructions carefully before using the TENS eco 2.

- The TENS eco 2 is only to be used for stimulation purposes on one patient at any one time.
- Only use the TENS eco 2 with original accessories.
- The size of the electrodes should to be not less than 2 cm^2.
- The electrodes should be positioned in such ways that the current flow will not cross through the heart.
- Keep the TENS eco 2 away from water or other liquids. Do not drop the TENS eco 2, do not use it inappropriately or expose it to extreme temperatures or high levels of humidity (not less than 10 °C or more than 40 °C or a relative humidity of more than 90 %).
- Do not use the TENS eco 2 if it is not working properly or if it has been damaged in any way.
- Be careful when using the TENS eco 2 near or on children. Keep the unit away from children.
- Always store the TENS eco 2 in its case to protect it from damage and dust.
- To avoid reciprocal interference, the TENS eco 2 should not be operated in the vicinity of other electronic devices. If this is not possible, the various unit functions should be closely monitored during operation so that proper use in accordance with the regulations is ensured.
- The simultaneous connection to the patient of a high frequency surgical unit can lead to burning under the electrodes or around the probe.
- Operating close (for example 1m) to short wave and microwave units or mobile telephone systems can cause fluctuations in the output values of the electric current stimulation unit.
- Do not use the machine during the simultaneous operation of other machines, when driving or when asleep.

Contra-indications

Please check with your physician before using the TENS eco 2 if one of these apply to you:

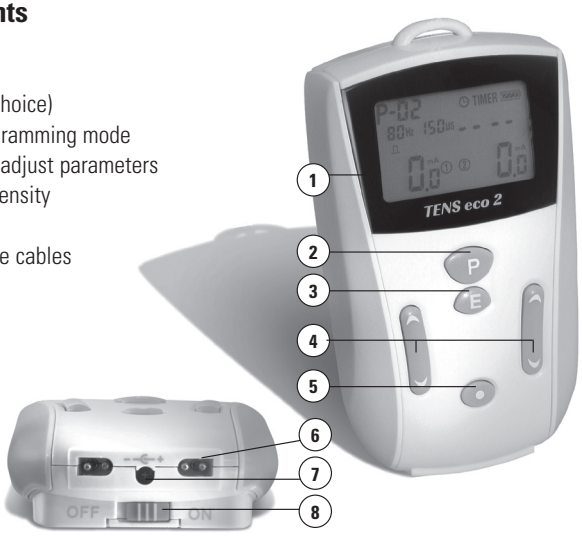
- Patients with electronic implants such as heart pacemakers, defibrillators or pumps
- Patients with cardiac rhythm disorders
- During pregnancy
- Patients subject to seizure disorder / epilepsy
- Patients with skin disorders in the vicinity of the electrodes
- Patients with malignant diseases in the region of application

Side effects

- Pain caused by the stimulation: The stimulation can be perceived as uncomfortable/ painful if the electric current is too intensive or if the electrodes have been positioned unfavorably. Unpleasant side effects can be avoided by adjusting the intensity, using another program with other parameters and the possible re-positioning of the electrodes.
- Skin intolerance which can result from the electrodes, the electrode gel or the electric current impulses. The physician should be consulted in cases of reddening, burning, itching or blistering under the electrodes or in the vicinity of the electrodes. Slight skin reddening of short duration in the area of the electrodes following stimulation is quite normal because blood circulation has been improved by the effects of the stimulation.
- Muscular pain: If the stimulation has been too intense or too long muscular aches in terms of sore muscle can occur. Shorten the treatment time and the intensity of stimulation at the beginning of muscle stimulation to avoid muscle ache.

Operating elements

1. Display
2. Menu key (Program choice)
3. Key to enter the programming mode
4. Modification keys to adjust parameters and to modify the intensity
5. ON/OFF key
6. Output sockets for the cables
7. Output socket for the battery charger
8. ON/OFF commutator



Technical information

Description of the symbols

Attention: Read accompanying documents, especially user manual!

Follow instructions for use

Type BF applied part

Date of manufacture

REF Catalogue number

SN Serial number

Environment
Do not dispose of the appliance with the normal household waste at the end of its life, but hand it in at an official collection point for recycling. By doing this you will help to protect the environment.

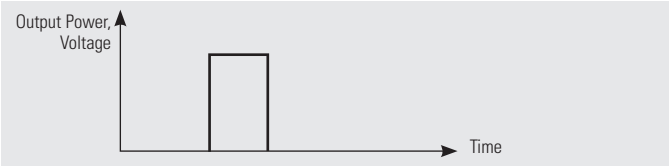
Recycling

CE0482 By labelling with CE mark, the manufacturer asserts that the product fulfills all relevant requirements of the respective EC Directives. A conformation assessment process has been successfully completed. The identification number in respect of the conformation assessment process is given in accordance with the CE labelling of the relevant notified body.

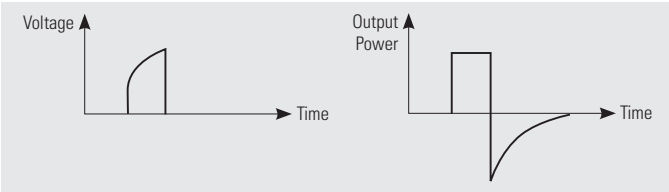
Technical specification
Two-channel nerve and muscle stimulator with electrically insulated channels, constant current characteristic, output short circuit control element (AKS), 12 integrated pre-set programs and 12 user programs.

- Output current : 100 mA (with an actual resistor of 1kΩ)
- Frequency range: 1-120 Hz
- Impulse width: 50-400 µs
- Nominal current: 15 mA
- Power supply: integrated rechargeable battery NiMH 4.8 V
- Dimensions: 11.4 x 5.9 x 2.7 cm
- Weight approx. 300 g

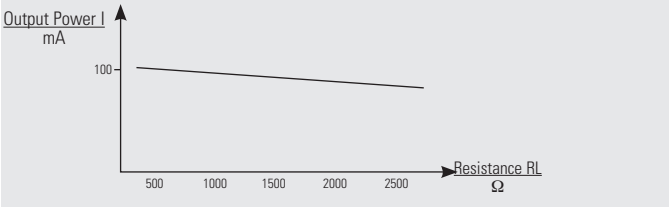
Pulse form with 1kΩ load real



With ANSI/AAMI standard load



Change in output current depending on load



Operating the TENS eco 2

The battery of new TENS eco 2 units need to be charged before first use. Please read the chapter "charging the battery" on page 10.

Connecting cables and electrodes

- Connect the electrodes with the cable(s) (always 2 electrodes per cable).
- Connect the cable(s) to the TENS eco 2 (no. 6).
- Place the electrodes on the desired area (see examples on chapter electrode placement).

Switching ON the TENS eco 2

- Switch the commutator (no. 8) to the ON position.
- Switch on the TENS unit by pressing the ⊙ key (no. 5)

The program shown on the display is the last which was used during the previous session. If the display shows a key symbol on the upper left side, the TENS eco 2 has previously interlocked a specific program (see chapter interlocking the key pad).

Selecting a program

Select a program by pressing the **P** key. To scroll through the programs, press the **P** key as often as necessary until you have selected the program of your choice. To return to the previous program, press one of the ⋁ keys.
Selecting a program is only possible if the keypad has not been interlocked on one specific program (see chapter interlocking the keypad).

Setting the intensity

Start the stimulation by increasing the intensity with the ⋀ key of the channel(s) connected to the electrodes.

⋀ key to increase the intensity
⋁ key to decrease the intensity

The intensity of each channel is displayed on the screen.
The intensity can be set between 0 and 100 mA.
By keeping the intensity keys pressed, the intensity will increase/decrease more rapidly.

Terminating the stimulation

You can terminate the stimulation at any time by pressing the **P** key. When the therapy time is completed the stimulation terminates automatically. If you press the ⊙ key the stimulation stops and the TENS eco 2 switches OFF.

Interlocking the keypad

Choose the desired program by pressing the **P** key (see chapter choosing a program). Press and hold for 3 seconds the **P** key and the right ⋁ keys to interlock the TENS unit on the chosen program. The TENS eco 2 can now only be used with the chosen program. A key symbol appears on the display adjacent to the program number. All keys except the intensity and the ON/OFF keys are interlocked into this mode. Use the same key combination to unlock the TENS unit.

Switching OFF the timer

You can use the TENS eco 2 with or without timer. All programs run for 30 minutes. Press and hold for 3 seconds the **E** key and the left ⋁ key. The total therapy time appears on the display. Press the **E** key to switch off the timer. The symbol "---" appears on the display. Press the ⊙ key to save the changes.

Switching ON/OFF the buzzer
Pressing the left ⋁ key for three seconds, with **E** keyswitching ON/OFF.

Creating a user program (P13 – P24 only)
Choose one program between P13 and P24. Press the **E** key to access the programming mode. The parameters to be changed flash. You can modify them by pressing the ⋀ and ⋁ keys. Switch to the next parameter by pressing the **E** key. The frequency, the pulse width and the time can be modified in the user programs.

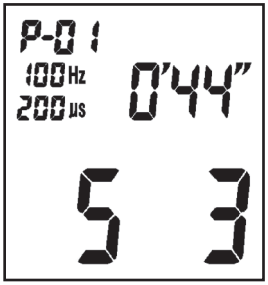
Factory settings
The parameters from P1 and P13 are identical in new devices, respectively for P2 and P14, P3 and P15, … P12 and P24.

Switching OFF the TENS unit
Press the ⊙ key to switch OFF the TENS eco 2. If the battery level is too low or if the TENS unit has not been used for the previous 2 minutes, it turns off automatically.

Setting date and time (for memory query mode)
Before you can use the memory query mode you need to set the date and time. Pressing and holding the **E** key for about 3 seconds leads you to the date/time mode. In date/time mode the LCD shows two figures: The left figure indicates the date, the right figure indicates the time.

Pressing the left ⋀ key increases the date by one day (max. 30).
Pressing the left ⋁ key decreases the date by one day (min. 1).
Pressing the right ⋀ key increases the time by one hour (max. 23).
Pressing the right ⋁ key decreases the time by one hour (min. 0).
Press the ⊙ key to save all parameters and to leave the date/time mode again. Date and time are continuously updated.
The TENS eco 2 switches OFF automatically after two minutes if no key is pressed. In this case none of the adjusted parameters are saved.

Memory Query Mode
First set the date and time (see chapter setting date and time). The memory query mode is used to read out saved therapy data from patients. By pressing and holding the right ⋁ key and **E** key for about 3 seconds you enter the memory query mode. If no values are saved, the display shows “null” for about 2 seconds and the device returns to standby mode automatically. If you have saved therapy data, the display shows the parameters of the last therapy session as shown below:



- Used program = P01
- Frequency = 100 Hz
- Pulse width = 200 µs
- Therapy duration = 0 min 44 s
- Day of therapy = 5 (fifth day)
- Therapy session no. = 3

You can save up to 90 therapy sessions respectively the last 3 of each day.

- With the left ∨ key you can return to the values of the previous day (until you reach the first recorded day).
- The left ∧ key lets you proceed to the next day (until you reach the current or last day).
- The right ∨ key brings you to the parameters of the previous therapy session of the respective day (until you reach the first session of the respective day).
- The right ∧ key shows you the parameters of the next therapy session (until you reach the last session of the respective day).

Resetting the memory

Enter the memory query mode (see above). Pressing and holding the **E** key for about 5 seconds will delete all saved data. The display shows "Clr" for about 2 seconds and the device can be used for stimulation again. The TENS eco 2 switches OFF automatically after two minutes if no key is pressed.

Charging the battery

The battery level is shown on the display with a battery symbol with 4 lines. If the battery level is too low the TENS unit switches OFF automatically and cannot be turned on again. The battery needs to be re-charged.

- Switch the commutator to the OFF position (no. 8).
- Connect the charger with the TENS eco 2 (socket no. 7).
- Connect the charger to the mains circuit. The diode on the charger illuminates in red.
- Charge the TENS unit until the diode on the charger illuminates in green.
- The battery is fully charged if the light on the charger appears in green. Plug OFF the charging cable from the mains circuit.

Caution! Do not charge the battery for more than 3 hours.

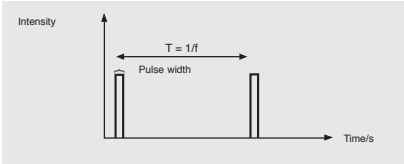
Important! Do not forget to switch the commutator ON again after charging.

Description of the programs

Program 1 + 13: Gate control 100 Hz
Both channels work with the same frequency and pulse width.
Frequency: 100 Hz

Pulse width:	200 µs
Therapy time:	30 min (1 to 99 min)

Indications: Acute nerve or joint pain
This program is used to treat acute neuropathic and joint pain. The effect is immediate.



Program 2 + 14: Gate control 80 Hz
Both channels work with the same frequency and pulse width
(see illustration Program 1).
Frequency: 80 Hz

Pulse width:	150 µs
Therapy time:	30 min (1 to 99 min)

Indications: Acute nerve or joint pain
Program 2 is similar to program 1 but works with a lower frequency and may therefore be considered as more pleasant.

Program 3 + 15: Low frequency 2 Hz
Both channels work with the same frequency and pulse width
(see illustration Program 1).
Frequency: 2 Hz

Pulse width:	250 µs
Therapy time:	30 min (1 to 99 min)

Indications: Diffuse nerve, joint or muscle pain, spasms, lower back pain, neck pain, fibromyalgia, chronic pain. This program is used to relax painful muscles and to achieve an endorphin release. Endorphins have an analgesic effect that lasts beyond stimulation, but you need to run program P3 to the end (30 min). To achieve particularly good effects use kaada electrodes placement (on the hand).

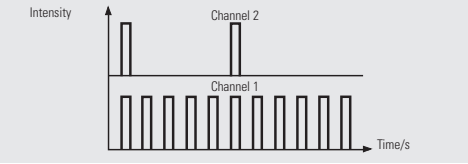
Program 4 + 16: Gate control (channel 1) + low frequency (channel 2)
The channels work with different frequencies but with the same pulse width.

Therapy time	30 min (1 to 99 min)	
Channel 1:		**Channel 2:**

Frequency:	100 Hz	Frequency:	2 Hz
Pulse width:	200 µs	Pulse width:	200 µs

Indication: Joint pain

This program combines the effects of program 1 and 3, in case the analgesic effect off program 3 is not strong enough.



Program 5 + 17: Adaption

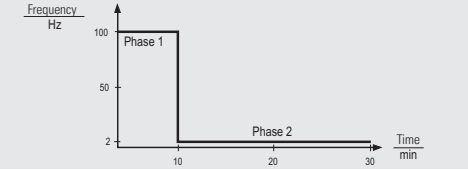
After phase 1 the program changes automatically to phase 2.

Therapy time: 30 min (1 to 99 min)

Phase 1:		**Phase 2:**	
Frequency:	100 Hz	Frequency:	2 Hz
Pulse width:	150 µs	Pulse width:	200 µs
Duration:	10 min	Duration:	20 min

Indications: Especially for lower back pain and sciatic pain syndrome

Program 5 starts with high frequency stimulation for 10 minutes, to give you immediate pain relief. After 10 minutes it automatically changes to a 20 minutes low frequency stimulation with acupuncture type impulses to release endorphins and to retain the analgesic effect even beyond stimulation.



Program 6 + 18: HAN stimulation

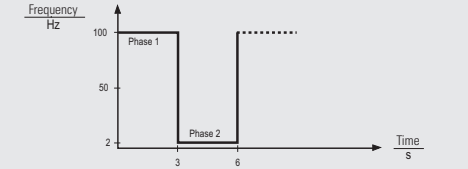
The device continuously changes between phase 1 and phase 2.

Therapy time: 30 min (1 to 99 min)

Phase 1:	**Phase 2:**		
Frequency:	100 Hz	Frequency:	2 Hz
Pulse width:	150 µs	Pulse width:	200 µs
Duration:	3 s	Duration:	3 s

Indications: All kinds of pain

This program combines the analgesic effect of high frequency stimulation with endorphin release caused by low frequency stimulation. Every 3 seconds it changes between a “pins and needles” stimulation and a pulsing stimulation.



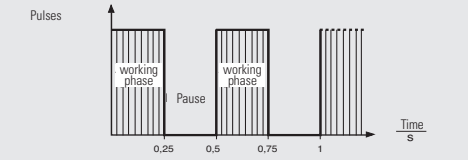
Program 7 + 19: Burst 2 Hz

This generates pulse packages (Burst).

Frequency:	100 Hz
Pulse width:	150 µs
Modulation:	Burst 0.5 s (0.25 s + 0.25 s)
Therapy time:	30 min (1 to 99 min)

Indications: Diffuse nerve, joint or muscle pain, spasms, lower back pain, neck pain, fibromyalgia.

This program covers the same indications as program 3, but the stimulation is often considered as more comfortable and pleasant than the normal low frequency stimulation.



Program 8 + 20: Modulation

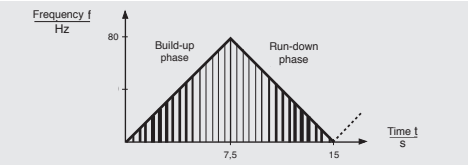
The frequency continuously changes within the frequency limits.

The pulse width adapts accordingly.

Minimal frequency:	2 Hz (Pulse width: 200 µs)
Maximal frequency:	80 Hz (Pulse width: 100 µs)
Modulation duration:	7.5 s (2 Hz → 80 Hz)
Therapy time:	30 min (1 to 99 min)

Indications: Acute nerve or joint pain (as an alternative to P1 and P2)

If you feel that the analgesic effect of program 1 or 2 is decreasing, change to program 8. With frequency modulation the body does not become accustomed to the stimulation.



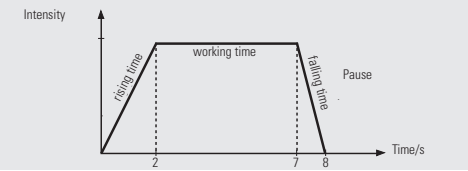
Program 9 + 21: Muscle stimulation

The intensity continuously changes according to the indicated parameters.

Frequency: 50 Hz		Pulse width:	250 µs
Rising ramp:	2 s	Working phase:	5 s
Falling ramp:	1 s	Pause:	12 s
Therapy time:	30 min (1 to 99 min)		

Indications: Prevention of muscular atrophy, muscle strengthening

This program is suitable to maintain the muscle volume, e.g. during injury or recovery, or to avoid muscle atrophy. In case of muscle atrophy, do not stimulate more than once a day for the first month. Certainly program 9 can also be used to strengthen a healthy muscle.



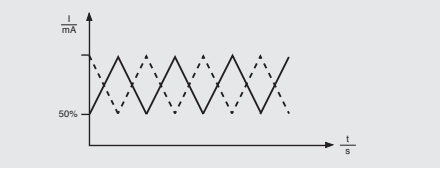
Program 10 + 22: Gate control dynamic slow

The intensity continuously changes. It increases within 1 s to the maximum intensity and decreases within 1 s to 50% of the maximum intensity. Both channels operate alternately (massage effect).

Frequency: 80 Hz	
Pulse width:	150 µs
Intensity modulation:	1 s rise, 1 s fall
Therapy time:	30 min (1 to 99 min)

Indications: Especially for acute back pain, lower back pain, sciatic pain

This program is recommended for the treatment of back pain. The massage effect provides a comfortable and pleasant stimulation. The so called Gate Control reflex which is achieved through this kind of stimulation is a natural reflex that you achieve e.g. by rubbing a painful area with your hands to calm acute pain. To achieve the massage effect it is essential to use both channels of the TENS unit.



Program 11 + 23: Gate control dynamic fast

The intensity continuously changes. It increases within 0.25 s to the maximum intensity and decreases within 0.25 s to 50% of the maximum intensity. Both channels operate alternately (massage effect). See illustration program 10.

Frequency: 80 Hz	
Pulse width:	150 µs
Intensity modulation:	0.25 s rise, 0.25 s fall
Therapy time:	30 min (1 to 99 min)

Indications: Heavy legs (venous return)

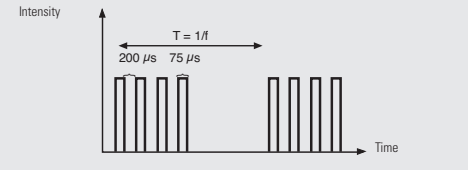
Program 11 is similar to program 10, but the movement of the massage waves is faster. It is used to improve the venous return for patients who suffer from heavy legs. To achieve the massage effect it is essential to use both channels of the TENS unit.

Program 12 + 24: Deep TENS

Program 12 works just like program 1. However, instead of just one pulse, four short pulse of 75 µs are generated with a pause of 200 µs between each pulse. 100 pulse packages are generated per seconds (carrier frequency = 100 Hz).

Frequency:	100 Hz
Pulse width:	75 µs
Modulation:	four pulses in a group, duration of periods 275 µs
Therapy time:	30 min (1 to 99 min)

This program could be called the last recourse if none of the other programs give analgesic effect. However, because of the high frequency this program is often felt as less pleasant. Furthermore, high frequency stimulation needs more battery power.



General information

Adjustments, modifications and repairs

The manufacturer is only responsible for the safety and performance of the TENS eco 2 when readjustments, alterations and repairs are carried out by authorised persons and when the TENS eco 2 is used in accordance with the operating instructions.

Warranty

Legal right of warranty is applied according to German Civil Code.

Guarantee

The manufacturer issues a guarantee of 12 months from the date of purchase.
The guarantee does not apply in the following cases:
- damage due to improper handling
- defects the customer is aware of on the date of purchase
- damage caused by the customer
- for wearing parts and consumable supplies like, for instance, electrodes, batteries and cables

Maintenance and cleaning

No special cleaning or care agents are required for the TENS eco 2. Clean the TENS unit with a soft, fluff-free cloth. Please ensure that no moisture permeates the TENS unit. If moisture does permeate the TENS unit, a technical check must be carried out before re-use.

Classification

In accordance with the Law on Medical Devices, the TENS eco 2 is classified as being a Class IIa medical device.

Delivery content

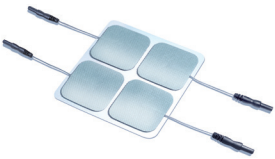
Art.-No.	Article	Quantity
104062	TENS eco 2	1
106351	Cable Type 5.15	2
283400	Self-adhesive electrodes 50x50 mm (4 pieces)	1
104776	Charger 3PN0508S EU	1
	Transportation bag	1
101446	Operating manual	1

Accessories

The following accessories can be combined with the TENS eco 2. The manufacturer cannot guarantee the security of the TENS eco 2 if it is not used with original accessories.

Stimex self-adhesive electrodes

Art. No.	Article	Pieces
281000	Stimex 32 mm round	4
282000	Stimex 50 mm round	4
283400	Stimex 50x50 mm	4
281032	Stimex 50x50 mm	20
283600	Stimex 50x90 mm	2
283000	Stimex 50x130 mm	2
283100	Stimex 80x130 mm	2
281027	Stimex sensitive 50x50 mm	4



Silicone electrodes (to be used with contact gel)

Art. No.	Article	Pieces
107090	Silicone electrode 20 mm round	2
107010	Silicone electrode 48x48 mm	2
107050	Silicone electrode 70x65 mm	2
107009	Silicone electrode 100x100 mm	2
108000	Contact gel for silicone electrodes (60 g)	1

MedicoBack: for the treatment of low back pain

Low back support bandage with pelotte and integrated electrodes to be used with pain management programs of the TENS eco 2.

MedicoBack P-type offers patients lumbar vertebrae stabilization and support as well as easy stimulation provided by the integrated electrodes. The pelotte with its massage nubs enhances the pain relieving effect. MedicoBack P-type may be used for slight or acute pain as well as for chronic pain in the lower back area.

Art. No.	Article	Size	Length
107034	MedicoBack P-type	S	80 - 90 cm
107036	MedicoBack P-type	M	90 - 100 cm
107037	MedicoBack P-type	L	100 - 110 cm
107038	MedicoBack P-type	XL	110 - 120 cm
107039	MedicoBack P-type	XXL	120 - 130 cm

Stimex garment electrodes: gloves and socks

The gloves and socks used in combination with the TENS eco 2 provide stimulation of the entire hand and/or foot and ankle and avoid the sometimes tiresome attachment of self-adhesive electrodes on the hand or the foot.

Gloves

Art. No.	Article	Size	Pair
107014	Stimulation gloves	S	1
107021	Stimulation gloves	M	1
107022	Stimulation gloves	L	1

Socks

Art. No.	Article	Size	Pair
107023	Stimulation socks	M	1
107024	Stimulation socks	L	

Charger 3PN0508S EU (Art.-Nr. 104776)

Cables Type 5.15 (Art. No. 106351)

Reference sheet for battery retraction and disposal

In connection with the sales of products which contain batteries or rechargeable batteries, we are obliged by law (battery law § 18, section 1) to advise you of the following:
The dustbin symbol ( ) marks batteries with hazardous substances as well as the circumstance that batteries must not be disposed of in the household waste but professionally. The chemical term of the hazardous substance is below the dustbin symbol.
You are obliged by law to return used batteries.
You may render used batteries at municipal collecting points or in local trade. We are also obliged to take back used batteries, whereat our obligation restricts to those which are or were part of our product range.
Therefore, you may send back used batteries to us adequately stamped by mail or render these at our warehouse free of charge at the following address:
schwa-medico GmbH, Wetzlarer Str. 41-43, 35630 Ehringshausen, Germany

Please refer to the following figures to see the respective symbols of batteries with hazardous substances:

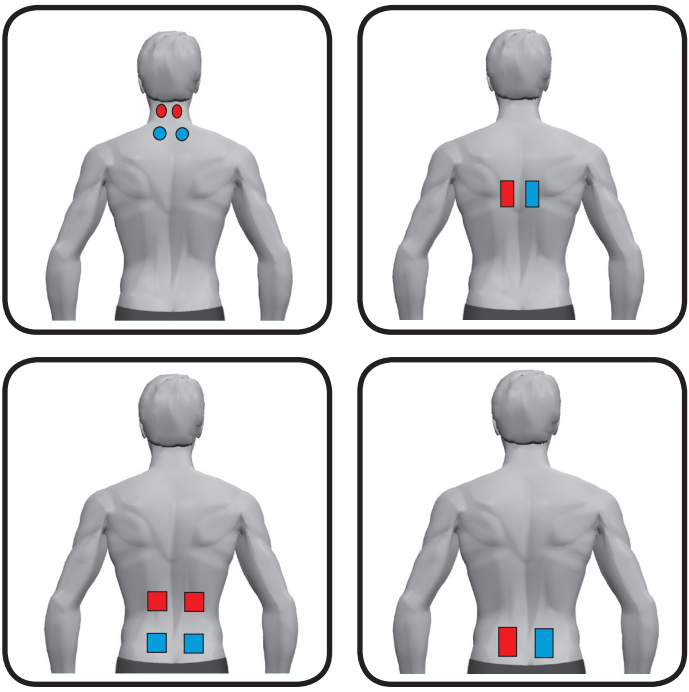
Battery contains more than 0.002 % cadmium

Battery contains more than 0.0005 % quicksilver

Battery contains more than 0.004 % plumb

Examples of electrode placements

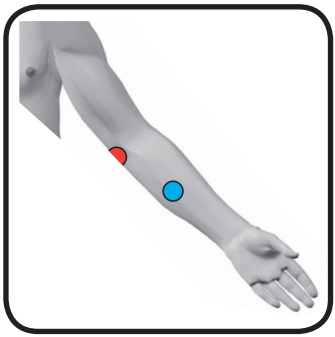
Back pain



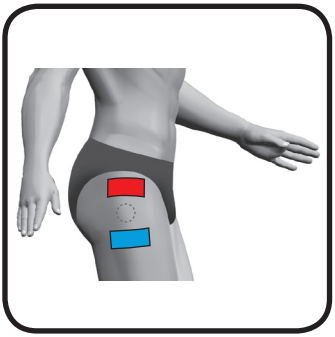
Shoulder pain

Epicondylitis radialis

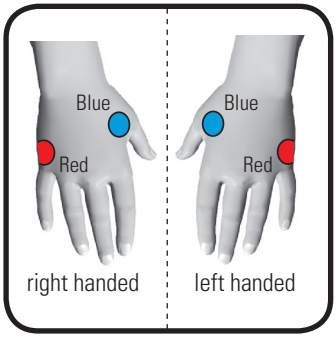
Epicondylitis ulnaris



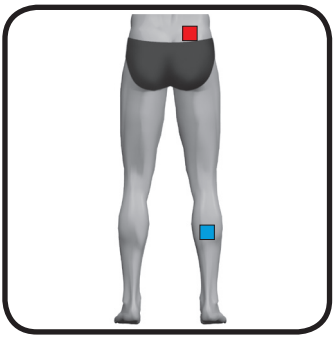
Arthrosis (hip)

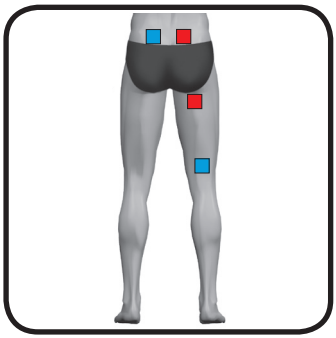


Kaada stimulation (1 channel only)

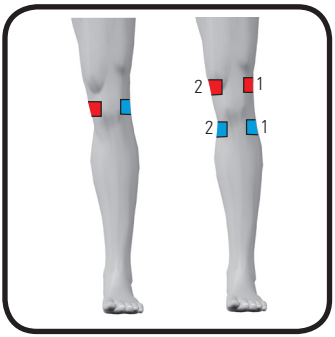


Sciatic pain



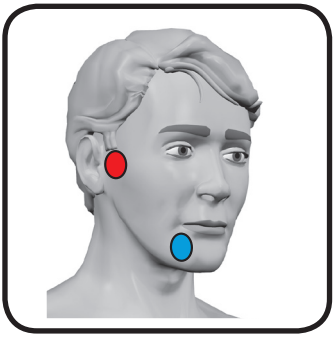


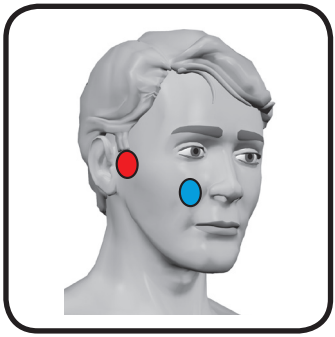
Gonarthrosis/knee pain



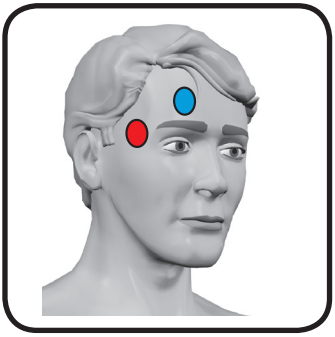
Ankle joint pain

Trigeminus neuralgia



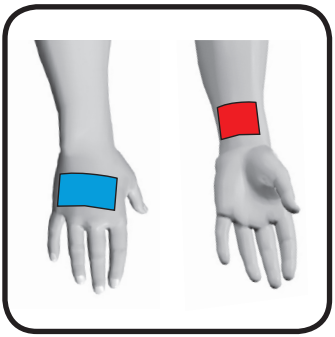


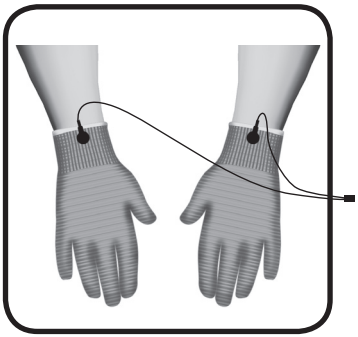
Migraine



Tension headache

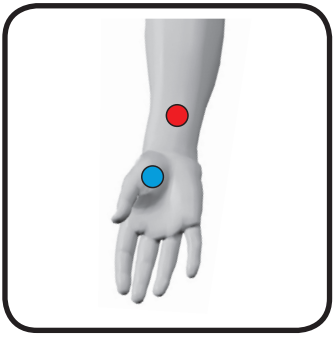
Polyarthritis



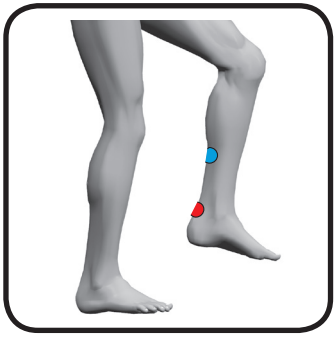


Polyneuropathy

Carpal tunnel syndrome



Pain of achilles tendon/heel pain

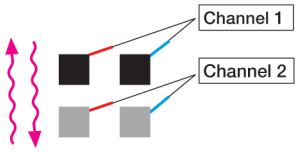


Electrode placement for dynamic stimulation (P10, P11, P22, P23)

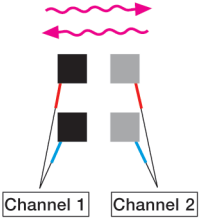
The stimulation is not administered simultaneously on both channels. The current flowes from one electrode to the other just like a wave undulating on the body. This kind of stimulation is far more comfortable than traditional neuro-muscular stimulation. Dynamic stimulation can be used with high frequency parameters for a improved pain control or with low frequency parameters for optimized muscle stimulation. This treatment method also has an enhanced effect on lymphatic drainage stimulation.

The placement of electrodes for dynamic stimulation depends on the direction of stimulation (rising/falling stimulation or sideways stimulation)

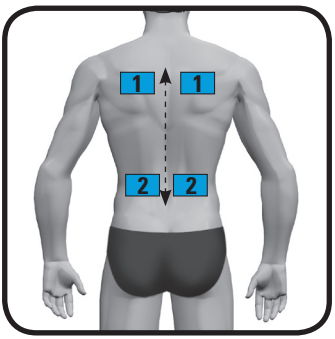
Rising or falling stimulation
for back or legs



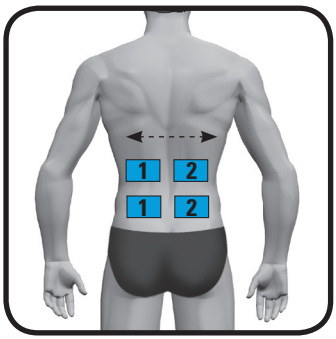
Sideways stimulation
for gluteus or stomach muscle



Rising and falling wave:



Right left wave:



Overview pre-set programs

Program no.	Program name	Indication
P 1	Gate control 1	Nociceptive pain, acute pain, neuropatic pain
P 2	Gate control 2	Alternative to program 1
P 3	Low frequency	Chronic nociceptive pain, improvement of blood circulation, Kaada stimulation
P 4	Gate control + low frequency	Combination of high and low frequency stimulation
P 5	Adaptation	Muscular pain
P 6	HAN	Suitable for almost all kinds of pain program
P 7	Burst	Alternative to program 3 (more comfortable)
P 8	Modulation	Alternative to the other programs in case of therapy resistance
P 9	Muscle stimulation	Atrophy prophylaxis, muscle strengthening
P 10	Gate control dynamic 1	Muscle relaxation
P 11	Gate control dynamic 2	Muscle relaxation, venous return
P 12	Deep TENS	Muscular pain, deep seatted pain

Description	Frequency/Hz	Pulse width/µs	Timer/min.
Both channels with the same parameters	100	200	30
Both channels with the same parameters	80	150	30
Both channels with the same parameters	2	250	30
Channel 1: 100 Hz Channel 2: 2 Hz	Channel 1: 100 Channel 2: 2	200	30
First 10 min 100 Hz, then 20 min with 2 Hz	100/2	150/200	10/20
3 s 100 Hz, then 3 s 2 Hz etc.	100/2	150/200	30
100 Hz for 0.25 s	100	150	30
Automatic frequency run from 2 Hz to 80 Hz within 7.5 s	2 - 80	200 - 100	30
Increase 2 s, working time 5 s, decrease 1 s, pause 12 s, automatic intensity adaption	50	250	30
Intensity within 1 s to maximum, then within 1 s reduced to 50%. Both channels in alternating operation	80	150	30
Intensity within 0.25 s to maximum, then within 0.25 s reduced to 50%. Both channels in alternating operation	80	150	30
Impulse packages of 4 impulses with a carrier frequency of 100 Hz. 200 µs pause between each impulse	100	75	30

Overview free programs

Program no.	Program name	Indication
U 1	Gate Control 1	Acute nociceptive pain, acute pain, chronic neuropathic pain
U 2	Gate Control 2	Alternative to program 1
U 3	Low frequency	Chronic nociceptive pain, improvement of blood circulation, Kaada stimulation
U 4	Gate Control + Low Frequency	Combination of high and low frequency
U 5	Adjustment	Muscular pain
U 6	HAN	For nearly all pain indications
U 7	Burst	Alternative to program no. 3 (more comfortable)
U 8	Modulation	Alternative to other programs if resistant to therapy
U 9	Muscle Stimulation	Prophylaxis treatment of muscle atrophy
U 10	Gate Control Dynamic slow	Muscle relaxation
U 11	Gate Control Dynamic fast	Muscle relaxation
U 12	Deep TENS	Muscle pain, pain in deep areas

Description	Frequency/Hz	Pulse width/µs	Timer/min.
Both channels with the same parameters	1-120	50-400	1-99
Both channels with the same parameters	1-120	50-400	1-99
Both channels with the same parameters	1-120	50-400	1-99
Channel 1 and channel 2 work with different parameters	Channel 1: 4-120 Channel 2: 2 Hz fixed	50-400	1-99
First 10 min.: 100 Hz Then 20 min.: 2 Hz	First frequency 1-120	50-400	1-99
alternating 3 s 100 Hz 3 s 2 Hz	First frequency 1-120	50-400	1-99
0.25 s long impulse with a frequency to be set	50-120	50-400	1-99
Automatic frequency run from one frequency to another within 7.5 s	First frequency: 1-50 Last frequency: 80	First pulse width: 100-400	1-99
Increase 2 s, working time 5 s, decrease 1 s, pause 12 s, frequency to be set, automatic intensity adaption	1-120	50-400	1-99
Intensity within 1 s to maximum, then within 1 s reduced to 50%. Both channels in alternating operation	10-120	50-400	1-99
Intensity within 0.25 s to maximum, then within 0.25 s reduced to 50%. Both channels in alternating operation	50-120	50-400	1-99
Impulse packages of 4 impulses with a pulse width to be set working with a frequency carrier to be set.	1-120	50-400	1-99

schwa-medico
HOLISTIC HEALTH

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